. # 10

1632

ENTERED

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           RAW SEQUENCE LISTING               DATE: 02/13/2002
           PATENT APPLICATION:  US/09/754,997A    TIME: 15:28:10

           Input Set : A:\NI4552.txt
           Output Set: N:\CRF3\02132002\I754997A.raw

 4 <110> APPLICANT: Salbaum, Michael J.
 6 <120> TITLE OF INVENTION: NOPE Polypeptides, Encoding Nucleic
 7        Acids and Methods of Use
 9 <130> FILE REFERENCE: P-NI 4552
11 <140> CURRENT APPLICATION NUMBER: US 09/754,997A
12 <141> CURRENT FILING DATE: 2001-01-04
14 <150> PRIOR APPLICATION NUMBER: US 60/174,496
15 <151> PRIOR FILING DATE: 2000-01-04
17 <150> PRIOR APPLICATION NUMBER: US 60/205,789
18 <151> PRIOR FILING DATE: 2000-05-19
20 <160> NUMBER OF SEQ ID NOS: 45
22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 6176
26 <212> TYPE: DNA
27 <213> ORGANISM: Mus musculus
29 <220> FEATURE:
30 <221> NAME/KEY: CDS
31 <222> LOCATION: (1)...(3756)
33 <400> SEQUENCE: 1
34 atg gcg cgg gcg gac acg ggc cgc ggg ctc ctg gtg ctg acc ttc tgc     48
35 Met Ala Arg Ala Asp Thr Gly Arg Gly Leu Leu Val Leu Thr Phe Cys
36  1               5                  10                  15
38 ctg ctg tcc gcg cgc ggg gag ctg cca ttg ccc cag gag aca act gtc     96
39 Leu Leu Ser Ala Arg Gly Glu Leu Pro Leu Pro Gln Glu Thr Thr Val
40              20                  25                  30
42 aag ctg agc tgt gat gag gga ccc ctg caa gtg atc ctg ggc cct gag    144
43 Lys Leu Ser Cys Asp Glu Gly Pro Leu Gln Val Ile Leu Gly Pro Glu
44          35                  40                  45
46 cag gct gtg gtg ctg gac tgc act ttg ggg gct aca gct gct ggg cct    192
47 Gln Ala Val Val Leu Asp Cys Thr Leu Gly Ala Thr Ala Ala Gly Pro
48      50                  55                  60
50 ccg acc agg gtg aca tgg agc aag gat gga gac act gta cta gag cat    240
51 Pro Thr Arg Val Thr Trp Ser Lys Asp Gly Asp Thr Val Leu Glu His
52  65                  70                  75                  80
54 gag aac ctg cac ctg cta ccc aat ggc tcc ctg tgg ctg tcc tca ccc    288
55 Glu Asn Leu His Leu Leu Pro Asn Gly Ser Leu Trp Leu Ser Ser Pro
56              85                  90                  95
58 cta gag caa gaa gac agc gat gat gag gaa gct ctt agg atc tgg aag    336
59 Leu Glu Gln Glu Asp Ser Asp Asp Glu Glu Ala Leu Arg Ile Trp Lys
60             100                 105                 110
62 gtc act gag ggc agc tat tcc tgt ctg gcc cac agc ccg cta gga gtg    384
63 Val Thr Glu Gly Ser Tyr Ser Cys Leu Ala His Ser Pro Leu Gly Val
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64          115               120               125
66 gtg gcc agc cag gtt gct gtg gtc aag ctt gcc aca ctc gaa gac ttc  432
67 Val Ala Ser Gln Val Ala Val Val Lys Leu Ala Thr Leu Glu Asp Phe
68      130               135               140
70 tct ctg cac ccc gag tcc cag att gtg gag gag aac ggg aca gca cgc  480
71 Ser Leu His Pro Glu Ser Gln Ile Val Glu Glu Asn Gly Thr Ala Arg
72 145               150               155               160
74 ttt gaa tgc cac acc aag ggc ctt cca gcc ccc atc att act tgg gaa  528
75 Phe Glu Cys His Thr Lys Gly Leu Pro Ala Pro Ile Ile Thr Trp Glu
76               165               170               175
78 aag gac cag gtg acc gtg cct gag gag ccc cgg ctc atc act ctt ccc  576
79 Lys Asp Gln Val Thr Val Pro Glu Glu Pro Arg Leu Ile Thr Leu Pro
80               180               185               190
82 aag tgg ctc ctc cag atc cta gat gtc cag gac agt gat gca ggc tcc  624
83 Lys Trp Leu Leu Gln Ile Leu Asp Val Gln Asp Ser Asp Ala Gly Ser
84          195               200               205
86 tac cgc tgc gtg gcc acc aat tca gcc cgc caa cga ttc agc cag gag  672
87 Tyr Arg Cys Val Ala Thr Asn Ser Ala Arg Gln Arg Phe Ser Gln Glu
88      210               215               220
90 gcc tcg ctc act gtg gcc ctc aga ggg tct ttg gag gct acc agg ggg  720
91 Ala Ser Leu Thr Val Ala Leu Arg Gly Ser Leu Glu Ala Thr Arg Gly
92 225               230               235               240
94 cag gat gtg gtc att gtg gca gcc cca gag aac acc acg gta gtg tct  768
95 Gln Asp Val Val Ile Val Ala Ala Pro Glu Asn Thr Thr Val Val Ser
96               245               250               255
98 gga cag aat gta gtg atg gag tgc gtg gcc tct gct gac ccc acc cct  816
99 Gly Gln Asn Val Val Met Glu Cys Val Ala Ser Ala Asp Pro Thr Pro
100               260               265               270
102 ttt gtg tcc tgg gtc cga cag gat gga aag cct atc tcc acg gat gtc  864
103 Phe Val Ser Trp Val Arg Gln Asp Gly Lys Pro Ile Ser Thr Asp Val
104      275               280               285
106 atc gtt ctg ggc cgg acc aat cta ctc atc gcc agc gcg cag cct cgg  912
107 Ile Val Leu Gly Arg Thr Asn Leu Leu Ile Ala Ser Ala Gln Pro Arg
108      290               295               300
110 cac tct gga gtc tat gtc tgc cga gcc aac aag ccc ctc acg cgt gac  960
111 His Ser Gly Val Tyr Val Cys Arg Ala Asn Lys Pro Leu Thr Arg Asp
112 305               310               315               320
114 ttc gcc act gcg gct gct gag ctc cga gtg ctt gct gcc cca gcc atc  1008
115 Phe Ala Thr Ala Ala Ala Glu Leu Arg Val Leu Ala Ala Pro Ala Ile
116               325               330               335
118 tcg cag gca ccc gag gcg ctc tcg cgg acg cgg gcc agc acc gcg cgc  1056
119 Ser Gln Ala Pro Glu Ala Leu Ser Arg Thr Arg Ala Ser Thr Ala Arg
120          340               345               350
122 ttc gtg tgc cgg gcg tcc ggg gag cca cgg ccc gcg ctg cac tgg ctg  1104
123 Phe Val Cys Arg Ala Ser Gly Glu Pro Arg Pro Ala Leu His Trp Leu
124          355               360               365
126 cac gac ggg atc ccg ttg cga ccc aat ggg cgc gtc aag gtg cag ggc  1152
127 His Asp Gly Ile Pro Leu Arg Pro Asn Gly Arg Val Lys Val Gln Gly
128      370               375               380
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RAW SEQUENCE LISTING
US/09/754,997A   DATE: 02/13/2002

Input Set : A:\NI4552.txt
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130 ggt ggc ggc agc ttg gtc atc act cag atc ggc ctg cag gac gct ggc      1200
131 Gly Gly Gly Ser Leu Val Ile Thr Gln Ile Gly Leu Gln Asp Ala Gly
132 385             390             395             400
134 tac tac cag tgc gta gca gaa aac agc gcg gga act gcc tgt gcc gct      1248
135 Tyr Tyr Gln Cys Val Ala Glu Asn Ser Ala Gly Thr Ala Cys Ala Ala
136             405             410             415
138 gcg ccc ctg gcg gta gtg gtg cgc gag ggg ctg ccc agc gcc ccg act      1296
139 Ala Pro Leu Ala Val Val Val Arg Glu Gly Leu Pro Ser Ala Pro Thr
140             420             425             430
142 cgg gtc aca gcc acg ccg ctg agc agc tcc tct gtg ctg gtg gcc tgg      1344
143 Arg Val Thr Ala Thr Pro Leu Ser Ser Ser Ser Val Leu Val Ala Trp
144             435             440             445
146 gag cgg cct gag ttg cac agc gag caa atc att ggc ttc tct ctt cac      1392
147 Glu Arg Pro Glu Leu His Ser Glu Gln Ile Ile Gly Phe Ser Leu His
148             450             455             460
150 tac caa aag gca agg gga gtg gac aat gtg gag tac cag ttt gca gta      1440
151 Tyr Gln Lys Ala Arg Gly Val Asp Asn Val Glu Tyr Gln Phe Ala Val
152 465             470             475             480
154 aac aat gac acc aca gag ctg cag gtt cgg gac ctg gaa ccc aac acg      1488
155 Asn Asn Asp Thr Thr Glu Leu Gln Val Arg Asp Leu Glu Pro Asn Thr
156             485             490             495
158 gat tat gag ttc tac gtg gtg gcc tac tcc cag ctg ggg gcc agc cga      1536
159 Asp Tyr Glu Phe Tyr Val Val Ala Tyr Ser Gln Leu Gly Ala Ser Arg
160             500             505             510
162 acc tcc agc cca gcc ctg gtg cat aca ctg gac gat gtc ccc agc gca      1584
163 Thr Ser Ser Pro Ala Leu Val His Thr Leu Asp Asp Val Pro Ser Ala
164             515             520             525
166 gca ccc cag ctt acc ttg tcc agc ccc aac ccc tcg gac atc agg gtg      1632
167 Ala Pro Gln Leu Thr Leu Ser Ser Pro Asn Pro Ser Asp Ile Arg Val
168             530             535             540
170 gca tgg ctg ccc ctg ccc tcc agc ctg agc aat gga cag gtg ctg aag      1680
171 Ala Trp Leu Pro Leu Pro Ser Ser Leu Ser Asn Gly Gln Val Leu Lys
172 545             550             555             560
174 tac aag ata gag tac ggt ttg ggg aag gaa gat cag gtt ttc tcc acc      1728
175 Tyr Lys Ile Glu Tyr Gly Leu Gly Lys Glu Asp Gln Val Phe Ser Thr
176             565             570             575
178 gag gtg cct gga aat gag aca caa ctt acg tta aac tca ctt cag cca      1776
179 Glu Val Pro Gly Asn Glu Thr Gln Leu Thr Leu Asn Ser Leu Gln Pro
180             580             585             590
182 aac aaa gtg tac cga gtc cgg att tca gct ggc act ggc gct ggc tat      1824
183 Asn Lys Val Tyr Arg Val Arg Ile Ser Ala Gly Thr Gly Ala Gly Tyr
184             595             600             605
186 gga gtc cct tct cag tgg atg cag cac agg aca cct ggt gtg cac aac      1872
187 Gly Val Pro Ser Gln Trp Met Gln His Arg Thr Pro Gly Val His Asn
188             610             615             620
190 cag agc cat gtt ccc ttt gcc cct gca gaa ttg aag gtg agg gca aag      1920
191 Gln Ser His Val Pro Phe Ala Pro Ala Glu Leu Lys Val Arg Ala Lys
192 625             630             635             640
194 atg gag tcc ctg gtg gtg tca tgg cag ccg ccc cct cac ccc acc cag      1968
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Input Set : **A:\NI4552.txt**
Output Set: **N:\CRF3\02132002\I754997A.raw**

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195 Met Glu Ser Leu Val Val Ser Trp Gln Pro Pro Pro His Pro Thr Gln
196                 645                 650                 655
198 atc tct gga tac aaa ctc tac tgg gga gag gtg gga aca gag gag gag    2016
199 Ile Ser Gly Tyr Lys Leu Tyr Trp Gly Glu Val Gly Thr Glu Glu Glu
200                 660                 665                 670
202 gca gat ggt gac cgc ccc cca ggg ggt cgt gga gat caa gct tgg gac    2064
203 Ala Asp Gly Asp Arg Pro Pro Gly Gly Arg Gly Asp Gln Ala Trp Asp
204                 675                 680                 685
206 gtc ggg ccc gtg cgg ctg aag aag aaa gtg aag cag tat gaa ctg acc    2112
207 Val Gly Pro Val Arg Leu Lys Lys Lys Val Lys Gln Tyr Glu Leu Thr
208         690                 695                 700
210 cag tta gtc cct ggc agg ccg tac gag gtg aag ctc gta gct ttc aac    2160
211 Gln Leu Val Pro Gly Arg Pro Tyr Glu Val Lys Leu Val Ala Phe Asn
212 705                 710                 715                 720
214 aaa cac gag gac ggc tac gct gct gtg tgg aag ggc aag acg gag aag    2208
215 Lys His Glu Asp Gly Tyr Ala Ala Val Trp Lys Gly Lys Thr Glu Lys
216                 725                 730                 735
218 gcg ccc acg cca gac ctg cct atc cag agg ggg cca ccg ctg cct cct    2256
219 Ala Pro Thr Pro Asp Leu Pro Ile Gln Arg Gly Pro Pro Leu Pro Pro
220                 740                 745                 750
222 gcc cat gtc cac gca gag tca aac agc tcc act tcc att tgg ctt cgg    2304
223 Ala His Val His Ala Glu Ser Asn Ser Ser Thr Ser Ile Trp Leu Arg
224                 755                 760                 765
226 tgg aag aag cca gac ttt acc act gtc aag att gtc aac tac act gta    2352
227 Trp Lys Lys Pro Asp Phe Thr Thr Val Lys Ile Val Asn Tyr Thr Val
228         770                 775                 780
230 cgc ttc ggc ccc tgg ggg ctc agg aat gct tcc ctg gtc acc tac tat    2400
231 Arg Phe Gly Pro Trp Gly Leu Arg Asn Ala Ser Leu Val Thr Tyr Tyr
232 785                 790                 795                 800
234 acc agc tct gga gaa gac att ctc att ggc ggc ctg aaa cca ttt acc    2448
235 Thr Ser Ser Gly Glu Asp Ile Leu Ile Gly Gly Leu Lys Pro Phe Thr
236                 805                 810                 815
238 aag tac gag ttt gcg gta cag tcc cac gga gtg gat atg gat ggg ccc    2496
239 Lys Tyr Glu Phe Ala Val Gln Ser His Gly Val Asp Met Asp Gly Pro
240                 820                 825                 830
242 ttt ggc tcc gtc gta gaa cgc tcc acc ctg cct gac cgg cct tca aca    2544
243 Phe Gly Ser Val Val Glu Arg Ser Thr Leu Pro Asp Arg Pro Ser Thr
244                 835                 840                 845
246 cct cct tct gac ctg cgc ctg agc ccc ctg aca cca tcc acc gtt cgg    2592
247 Pro Pro Ser Asp Leu Arg Leu Ser Pro Leu Thr Pro Ser Thr Val Arg
248         850                 855                 860
250 tta cac tgg tgt ccc ccc acg gag ccc aat ggt gag att gtg gag tat    2640
251 Leu His Trp Cys Pro Pro Thr Glu Pro Asn Gly Glu Ile Val Glu Tyr
252 865                 870                 875                 880
254 cta att ctc tac agc aac aac cac acc cag ccc gaa cac cag tgg aca    2688
255 Leu Ile Leu Tyr Ser Asn Asn His Thr Gln Pro Glu His Gln Trp Thr
256                 885                 890                 895
258 ctg ctc acc aca gag gga aac atc ttc agt gca gag gtc cat ggc cta    2736
259 Leu Leu Thr Thr Glu Gly Asn Ile Phe Ser Ala Glu Val His Gly Leu
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RAW SEQUENCE LISTING   DATE: 02/13/2002
PATENT APPLICATION: US/09/754,997A   ...: ...28:40

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Output Set: N:\CRF3\02132002\I754997A.raw

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260                 900                 905                 910
262 gag agt gac act cgg tat ttc ttc aag atg gga gcc cgc aca gag gtg   2784
263 Glu Ser Asp Thr Arg Tyr Phe Phe Lys Met Gly Ala Arg Thr Glu Val
264         915                 920                 925
266 ggg cct ggg ccc ttt tcc cgc ttg cag gat gtg att act ctg caa gag   2832
267 Gly Pro Gly Pro Phe Ser Arg Leu Gln Asp Val Ile Thr Leu Gln Glu
268         930                 935                 940
270 aca ttc tca gac tcc ttg gat gtg cac gcc gtc acg ggc atc atc gtg   2880
271 Thr Phe Ser Asp Ser Leu Asp Val His Ala Val Thr Gly Ile Ile Val
272 945                 950                 955                 960
274 ggt gtc tgc ctg ggc ctt ctc tgc ctc ctg gcc tgc atg tgt gct ggc   2928
275 Gly Val Cys Leu Gly Leu Leu Cys Leu Leu Ala Cys Met Cys Ala Gly
276                 965                 970                 975
278 cta cga caa agc tcc cac agg gaa gcc ctt ccc gga ttg tcc tcc tca   2976
279 Leu Arg Gln Ser Ser His Arg Glu Ala Leu Pro Gly Leu Ser Ser Ser
280                 980                 985                 990
282 ggc acc cca gga aac cca gcg ctc tac aca aga gct cgg ctt ggg cct   3024
283 Gly Thr Pro Gly Asn Pro Ala Leu Tyr Thr Arg Ala Arg Leu Gly Pro
284         995                 1000                1005
286 ccc agt gtc cct gct gcc cat gag ttg gag tcc ctc gtg cat cct cgt   3072
287 Pro Ser Val Pro Ala Ala His Glu Leu Glu Ser Leu Val His Pro Arg
288         1010                1015                1020
290 ccc cag gat tgg tcc cca cca ccc tca gat gtg gaa gac aag gct gaa   3120
291 Pro Gln Asp Trp Ser Pro Pro Pro Ser Asp Val Glu Asp Lys Ala Glu
292 1025                1030                1035                1040
294 gta cac agc ctt atg ggt ggc agt gtt tca gat tgc cgg ggc cac tcc   3168
295 Val His Ser Leu Met Gly Gly Ser Val Ser Asp Cys Arg Gly His Ser
296                 1045                1050                1055
298 aag aga aag atc tcc tgg gct cag gca ggg gga cca aac tgg gca ggc   3216
299 Lys Arg Lys Ile Ser Trp Ala Gln Ala Gly Gly Pro Asn Trp Ala Gly
300                 1060                1065                1070
302 tcc tgg gca ggc tgt gag ctg ccc cag ggt agt ggt cca agg ccg gct   3264
303 Ser Trp Ala Gly Cys Glu Leu Pro Gln Gly Ser Gly Pro Arg Pro Ala
304         1075                1080                1085
306 ctg acc cgt gct ctg ctg cct cca gcg gga acc ggg cag aca ctg ctg   3312
307 Leu Thr Arg Ala Leu Leu Pro Pro Ala Gly Thr Gly Gln Thr Leu Leu
308         1090                1095                1100
310 ctg caa gcc ctg gtg tat gac ggc ata aag agc aac ggg aga aag aag   3360
311 Leu Gln Ala Leu Val Tyr Asp Gly Ile Lys Ser Asn Gly Arg Lys Lys
312 1105                1110                1115                1120
314 ccg tcc cca gcc tgc agg aat cag gtg gaa gct gag gtc att gtc cac   3408
315 Pro Ser Pro Ala Cys Arg Asn Gln Val Glu Ala Glu Val Ile Val His
316                 1125                1130                1135
318 tcc gac ttc ggt gca tcc aaa gga tgt cct gac ctc cac ctc caa gac   3456
319 Ser Asp Phe Gly Ala Ser Lys Gly Cys Pro Asp Leu His Leu Gln Asp
320         1140                1145                1150
322 ctg gag cca gag gaa cca ctg act gca gag act ctg cct tcc acg tct   3504
323 Leu Glu Pro Glu Glu Pro Leu Thr Ala Glu Thr Leu Pro Ser Thr Ser
324         1155                1160                1165
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VERIFICATION SUMMARY   DATE: 02/13/2002
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Input Set : A:\NI4552.txt
Output Set: N:\CRF3\02132002\I754997A.raw